AMENDMENTS TO THE CLAIMS

The following is a complete listing of the revised claims with a status identifier in parenthesis.

LISTING OF CLAIMS

1. (Currently Amended) A computer tomography unit, comprising:

an X-ray beam source;

a radiation detector including a plurality of detector elements;

a data acquisition system for reading the electrical signals produced by the detector elements and for processing the signals to form raw data;

an image computer, arranged downstream from the data acquisition system, for receiving the raw data via a data transmission path; and

an evaluation device, designed for automatic assessment of the quality of the radiation detector and for automated assessment of ~~at least one of~~ the quality of the data acquisition system and the data transmission path, wherein the evaluation device is adapted to perform the following,

initiating at least one measurement for production of [[raw]] dark value data with the X-ray beam source switched off,

calculating, using the [[raw]] dark value data, at least one value of a parameter describing a signal offset of the radiation detector and a further parameter for assessment of the data transmission path, and

driving a display device to display an evaluation result including the calculated value.

2. (Currently Amended) A computer tomography unit of claim 1, wherein~~, comprising:~~

~~an X-ray beam source;~~

~~a radiation detector including a plurality of detector elements;~~

~~a data acquisition system for reading the electrical signals produced by the detector elements and for processing the signals to form raw data; and~~

~~an image computer arranged downstream from the data acquisition system and for receiving the raw data via a data transmission path; and~~

~~an evaluation device designed for automatic assessment of the quality of the radiation detector and for automated assessment of the quality of at least one of the data acquisition system and of the data transmission path, wherein the evaluation device is adapted to perform the following,~~

~~initiating~~ the evaluation device is adapted to initiate at least two measurements for production of raw data, at least one measurement producing dark value data, and wherein at least one of the drive and setting of the X-ray beam source is automatically changed between the at least two measurements~~,~~

~~calculating, using the raw data, at least one value of at least one parameter which allows a quality statement about the radiation detector,~~ ~~and~~

~~driving a display device to display an evaluation result including the calculated value~~.

3. (Previously Presented) The computer tomography unit as claimed in claim 2, wherein the parameter describes at least one of spectral linearity and signal linearity of the radiation detector.

4. (Previously Presented) The computer tomography unit as claimed in claim 1, wherein the evaluation device is adapted to compare the calculated value with a tolerance limit which is at least one of predetermined and read from a memory.

5. (Previously Presented) The computer tomography unit as claimed in claim 1, wherein the evaluation result is displayable graphically on the display device.

6. (Previously Presented) The computer tomography unit as claimed in claim 1, further comprising a memory device for storage of the evaluation result.

7. (Previously Presented) The computer tomography unit as claimed in claim 1, wherein a parameter is determinable which is suitable for assessment of the quality of at least one of the data acquisition system, of a component of, a module element of and a subarea of the data acquisition system.

8. (Previously Presented) The computer tomography unit as claimed in

claim 7, wherein the parameter is suitable for at least one of assessment of an integrator in the electronics channel, assessment of a monitor channel, assessment of a demultiplexer, and assessment of an A/D converter.

9. (Canceled)

10. (Previously Presented) The computer tomography unit as claimed in claim 7, wherein the evaluation device determines the value of the parameter statistically from the measured raw data.

11. (Previously Presented) The computer tomography unit as claimed in claim 1, wherein the evaluation device is implemented by use of appropriate software which is provided in a control computer fitted away from a gantry.

12.-14. (Cancelled)

15. (Previously Presented) The computer tomography unit as claimed in claim 2, wherein the evaluation device is adapted to compare the calculated value with a tolerance limit which is at least one of predetermined and read from a memory.

16. (Previously Presented) The computer tomography unit as claimed in claim 2, wherein the evaluation result is displayable graphically on the display

device.

17. (Previously Presented) The computer tomography unit as claimed in claim 5, wherein two or more parameters are combined to form a graphical pattern.

18. (Previously Presented) The computer tomography unit as claimed in claim 16, wherein two or more parameters are combined to form a graphical pattern.

19. (Previously Presented) The computer tomography unit as claimed in claim 2, further comprising a memory device for storage of the evaluation result.

20. (Previously Presented) The computer tomography unit as claimed in claim 2, wherein a further parameter is determinable which is suitable for assessment of the quality of at least one of the data acquisition system, a component of, a module element of and a subarea of the data acquisition system.

21. (Previously Presented) The computer tomography unit as claimed in claim 20, wherein the parameter is suitable for at least one of assessment of an integrator in the electronics channel, assessment of a monitor channel,

assessment of a demultiplexer, and assessment of an A/D converter.

22. (Canceled)

23. (Previously Presented) The computer tomography unit as claimed in claim 2, wherein the evaluation device determines the value of the parameter statistically from the measured raw data.

24. (Previously Presented) The computer tomography unit as claimed in claim 2, wherein the evaluation device is implemented by use of appropriate software which is provided in a control computer fitted away from a gantry.

25. (Currently Amended) The computer tomography unit as claimed in claim [[9]]1, wherein the evaluation device determines the value of the parameter statistically from the measured dark value [[raw]] data.